WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Friday, March 04, 2005

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ		
☐	L10	L2 and L4	34
☐	L9	L4 with L7	173
☐	L8	L4 and L7	2037
☐	L7	methyl salicylate	7885
☐	L6	(L2 or L3) with L4	849
☐	L5	(L2 or L3) and L4	11246
☐	L4	acetone	251725
☐	L3	salicylate	37704
☐	L2	salicylate-based	133
☐	L1	3880996.pn.	3

END OF SEARCH HISTORY

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Friday, March 04, 2005

Hide?	Set Name	Query	Hit Count
	DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ		
☐	L27	5753270.pn.	2
☐	L26	L4 and L25	47
☐	L25	L21 and L22 and L23 and L24	117
☐	L24	methyl salicylate	7885
☐	L23	menthol	12468
☐	L22	emollient	13150
☐	L21	acetone	251725
☐	L20	acetone and L19	5
☐	L19	L2 and L3 and L4 and L5 and L6 and L7	11
☐	L18	L2 and L3 and L4 and L5 and L6 and L7 and L8 and L10 and L11 and L12 and L13 and L14 and L15 and L16 and L17	3
☐	L17	water	3276103
☐	L16	camphene	1693
☐	L15	gamma terpinene	698
☐	L14	alpha terpinene	722
☐	L13	junipene	4
☐	L12	isopulegol	401
☐	L11	linalool	4422
☐	L10	alpha phellandrene	280
☐	L9	menthene	419
☐	L8	menthene	419
☐	L7	myrcene	2597
☐	L6	(sabine or sabinene)	3417
☐	L5	limonene	9088
☐	L4	eucalyptol	1983
☐	L3	beta pinene	3298
☐	L2	alpha pinene	3731
	DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ		
☐	L1	6528076.pn.	2

END OF SEARCH HISTORY

(FILE 'HOME' ENTERED AT 13:58:58 ON 04 MAR 2005)

FILE 'KOSMET, MEDLINE' ENTERED AT 13:59:19 ON 04 MAR 2005

L1	3	S	SALICYLATE BASED
L2	6796	S	SALICYLATE
L3	12471	S	ACETONE
L4	0	S	L1 AND L3
L5	13	S	L2 AND L3
L6	375	S	METHYL SALICYLATE
L7	6	S	L6 AND L3

```
* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  SEP 01   New pricing for the Save Answers for SciFinder Wizard within
                   STN Express with Discover!
 NEWS  4  OCT 28   KOREAPAT now available on STN
 NEWS  5  NOV 30   PHAR reloaded with additional data
 NEWS  6  DEC 01   LISA now available on STN
 NEWS  7  DEC 09   12 databases to be removed from STN on December 31, 2004
 NEWS  8  DEC 15   MEDLINE update schedule for December 2004
 NEWS  9  DEC 17   ELCOM reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  10 DEC 17   COMPUAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  11 DEC 17   SOLIDSTATE reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  12 DEC 17   CERAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  13 DEC 17   THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
 NEWS  14 DEC 30   EPFULL: New patent full text database to be available on STN
 NEWS  15 DEC 30   CAPLUS - PATENT COVERAGE EXPANDED
 NEWS  16 JAN 03   No connect-hour charges in EPFULL during January and
                   February 2005
 NEWS  17 FEB 25   CA/CAPLUS - Russian Agency for Patents and Trademarks
                   (ROSPATENT) added to list of core patent offices covered
 NEWS  18 FEB 10   STN Patent Forums to be held in March 2005
 NEWS  19 FEB 16   STN User Update to be held in conjunction with the 229th ACS
                   National Meeting on March 13, 2005
 NEWS  20 FEB 28   PATDPAFULL - New display fields provide for legal status
                   data from INPADOC
 NEWS  21 FEB 28   BABS - Current-awareness alerts (SDIs) available
 NEWS  22 FEB 28   MEDLINE/LMEDLINE reloaded
 NEWS  23 MAR 02   GBFULL: New full-text patent database on STN
 NEWS  24 MAR 03   REGISTRY/ZREGISTRY - Sequence annotations enhanced
 NEWS  25 MAR 03   MEDLINE file segment of TOXCENTER reloaded

 NEWS EXPRESS  JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
 NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement.  Please note that this agreement limits use to scientific
  research.  Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:58:58 ON 04 MAR 2005

=> file kosmet medline
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
```

```
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                    0.21       0.21

FILE 'KOSMET' ENTERED AT 13:59:19 ON 04 MAR 2005
COPYRIGHT (C) 2005 International Federation of the Societies of Cosmetics Chemists

FILE 'MEDLINE' ENTERED AT 13:59:19 ON 04 MAR 2005

=> s salicylate based
L1            3 SALICYLATE BASED

=> s salicylate
L2         6796 SALICYLATE

=> s acetone
L3        12471 ACETONE

=> s l1 and L3
L4            0 L1 AND L3

=> s l2 and L3
L5           13 L2 AND L3

=> d l5 1-13 ibib abs

L5    ANSWER 1 OF 13  KOSMET  COPYRIGHT 2005 IFSCC on STN
ACCESSION NUMBER:         17728  KOSMET
FILE SEGMENT:             scientific, technical
TITLE:                    SYNTHETIC FLORAL PERFUMES - PT I
AUTHOR:                   RUEMELE T
SOURCE:                   PERFUM ESSENT OIL REC, 1949, 40(8), 287-290, 296
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AN    17728  KOSMET    FS  scientific, technical
AB    All scents of roses are characterised by a specifically basic fragrance
      which is particularly familiar to the roses of the Rosa centifolia group
      The various ionone types are the most important and indispensable
      synthetic components for the manufacture of violet perfumes.
      Hydroxy-citronellal is the basic substance for a good narcissus perfume.
      Benzylidene acetone is the base of sweet-pea perfumes.
      Phenlyacetaldehyde is the basis for a synthetic hyacinth perfume. There
      are, of course a number of rose-scented compounds available, though
      merely theoretically of interest, viz 2-alpha-furyl and
      2-alpha-thienyl-benzylidene azole, alpha-furyl and alpha thienyl
      benzothiazole, beta-cyclo-hexylethyl alcohol, citrilidenethyl alcohol.
      Neryl butyrate, neryl formate, neryl isobutyrate or phenylaccialdehyde
      diethylene glycol acciate, compounds supplying an agreeably fine
      rose-like odour, might be preferred to those recorded above.
      Hydroxycitronellal phenylethyl acetal is a very interesting compound,
      since it develops a soft, bloomy and charming note and bears a striking
      resemblance to the odour of roses, lilac and lily of the valley. This
      substance is used for the white rose up to per cent. Other compounds with
      odour of roses include phenylacetaldehyde plus ethylene glycol or 1:2
      dihydroxypropane and mixtures of isomeric cyclic phonylacetal carbinois.
      Though rose perfumes seem to have lost their popularity, they play,
      nevertheless, quite a large role in the perfuming of creams, lipsticks,
      hair lotions, etc. The major importance of these perfumes is their
      suitability in rounding off as well as to leading the way, to the
      production of many bouquets and bloom-like creations. Some good synthetic
      rose perfumes are essentially useful for the perfumer, the reason being
      the opportunity in developing lily of the valley or other types of
      bouquets. The oil and the aromatics derived from vetivert are being
      increasingly used as fixatives and modifiers of odours such as the rose.
```

Costus oil has a violet like odour and blends very well with roses (floral oriental type). Generally substances may be regarded and recommended as suitable fixatives for roses: alpha, beta and methyl ionone, benzyl **salicylate**, patchouli, sandalwood, guaiol, storax and cinnamates. Many formulae are available for the composition of rose perfumes and the following provide a selection:

L5 ANSWER 2 OF 13 KOSMET COPYRIGHT 2005 IFSCC on STN
ACCESSION NUMBER: 11508 KOSMET
FILE SEGMENT: scientific, technical
TITLE: INTERLEUKIN 6 PRODUCTION IN VITRO: AN ALTERNATIVE READ-OUT FOR THE LOCAL LYMPH NODE ASSAY
AUTHOR: HULTON J (ZENECA CENTRAL TOXICOLOGY LABORATORY, ALDERLEY PARK, MACCLESFIELD, CHESHIRE SK10 4TJ, UK); DEARMAN R J; DEBICKI R J; RAMDIN L S P; KIMBER I
SOURCE: TOXICOL IN VITRO, 1994, 8(4), 711-713, 6 REFS
Meeting Organizer: 3RD INTERNATIONAL CONFERENCE ON PRACTICAL IN VITRO TOXICOLOGY, JULY 1993, NOTTINGHAM, UK
DOCUMENT TYPE: Journal
LANGUAGE: English
AN 11508 KOSMET FS scientific, technical
AB The murine local lymph node assay has been developed as an alternative method for the identification of contact allergens. In contrast to guinea pig tests, which rely on visual assessment of challenge-induced dermal reactions, the local lymph node assay measures events occurring during the induction of skin sensitization. Contact allergic potential is measured as a function of hyperplastic responses in draining lymph nodes following systemic administration of (3H)-thymidine. We have now examined whether the production in vitro of interleukin 6 (IL-6_ by draining lymph node cells isolated from sensitized mice provides an alternative endpoint for the local lymph node assay. In comparative experiments, the production of IL-6 by lymph node cells in culture correlated closely with proliferative responses in vitro. Only chemicals known to cause contact sensitization elicited measurable (over 150 pg/ml) IL-6 production; nonsensitizing chemicals, including skin irritants, did not. Experience to date suggests that IL-6 production may provide a useful alternative read-out for the identification of chemicals which have a significant skin-sensitizing potential

L5 ANSWER 3 OF 13 MEDLINE on STN
ACCESSION NUMBER: 2004326966 IN-PROCESS
DOCUMENT NUMBER: PubMed ID: 15228361
TITLE: Attenuated total internal reflectance infrared microspectroscopy as a detection technique for capillary electrophoresis.
AUTHOR: Patterson Brian M; Danielson Neil D; Sommer Andre J
CORPORATE SOURCE: Molecular Microspectroscopy Laboratory, Department of Chemistry and Biochemistry, Miami University, Oxford, OH 45056, USA.
SOURCE: Analytical chemistry, (2004 Jul 1) 76 (13) 3826-32. Journal code: 0370536. ISSN: 0003-2700.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: NONMEDLINE; IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20040702
Last Updated on STN: 20041219
AB A novel detector for capillary electrophoresis (CE) using single-bounce attenuated total internal reflectance (ATR) Fourier transform infrared (FT-IR) microspectroscopy is presented. The terminus of the CE capillary is placed approximately 1 microm from the internal reflectance crystal at the focus of an ATR infrared microscope. Using pressure driven flow

injection, concentration and volume detection limits have been determined for 25- and 10-microm-i.d. silica capillaries. Upon injection of 820 pL of succinylcholine chloride in a 10-microm capillary, a concentration detection limit of approximately 0.5 parts per thousand (ppt), or 410 pg, is found. The injection volume detection limit using a 108 ppt solution is 2.0 pL (216 pg). Sample separations using a programmed series of pressure, voltage, and again pressure on 25-, 50-, and 75-microm-i.d. capillaries are shown. CE separations of citrate and nitrate, as well as succinylcholine chloride with sodium **salicylate** using **acetone** as a neutral marker, are demonstrated. Several advantages of this CE-FT-IR technique include: (1) minimization of postcolumn broadening as a result of a small detector volume; (2) the ability to signal average spectra of the same aliquot, thereby improving the signal-to-noise in a stopped-flow environment; and (3) simplicity of design.

L5 ANSWER 4 OF 13 MEDLINE on STN
ACCESSION NUMBER: 2004237519 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15135115
TITLE: Determination of paraldehyde by gas chromatography in whole blood from children.
AUTHOR: Githiga Isaiah M; Muchohi Simon N; Ogutu Bernhards R; Newton Charles R J C; Otieno Godfrey O; Gitau Evelyn N; Kokwaro Gilbert O
CORPORATE SOURCE: Kenya Medical Research Institute [KEMRI]/Wellcome Trust Research Programme (Centre for Geographic Medicine Research-Coast), 80108-Kilifi.
SOURCE: Journal of chromatography. B, Analytical technologies in the biomedical and life sciences, (2004 Jun 15) 805 (2) 365-9.
Journal code: 101139554. ISSN: 1570-0232.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (VALIDATION STUDIES)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200501
ENTRY DATE: Entered STN: 20040512
Last Updated on STN: 20050122
Entered Medline: 20050121

AB A rapid, sensitive and selective gas chromatographic method with flame ionization detection was developed for the determination of paraldehyde in small blood samples taken from children. Whole blood samples (300 microl) collected in a 3 ml Wheaton glass sample vial were spiked with **acetone** (internal standard: 15 ng) followed by addition of concentrated hydrochloric acid. The mixture was heated in the sealed airtight sample vial in a water bath (96 Celsius; 5 min) to depolymerize paraldehyde to acetaldehyde. A 2 ml aliquot of the headspace was analyzed by gas chromatography with flame ionization detector using a stainless steel column (3 m x 4 mm i.d.) packed with 10% Carbowax 20 M/ 2% KOH on 80/100 Chromosorb WAW. Calibration curves were linear from 1.0-20 microg (r2>0.99). The limit of detection was 1.5 microg/ml, while relative mean recoveries at 2 and 18 microg were 105.6 +/- 8.4 and 101.2 +/- 5.9%, respectively (n = 10 for each level). Intra- and inter-assay relative standard deviations at 2, 10 and 18 microg were <15%. There was no interference from other drugs concurrently used in children with severe malaria, such as anticonvulsants (diazepam, phenytoin, phenobarbitone), antipyretics/analgesics (paracetamol and **salicylate**), antibiotics (gentamicin, chloramphenicol, benzyl penicillin) and antimalarials (chloroquine, quinine, proguanil, cycloguanil, pyrimethamine and sulfadoxine). The method was successfully applied for pharmacokinetic studies of paraldehyde in children with convulsions associated with severe malaria.

L5 ANSWER 5 OF 13 MEDLINE on STN
ACCESSION NUMBER: 2004024023 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14617432
TITLE: Safety assessment of Salicylic Acid, Butyloctyl **Salicylate**, Calcium **Salicylate**, C12-15 Alkyl **Salicylate**, Capryloyl Salicylic Acid, Hexyldodecyl **Salicylate**, Isocetyl **Salicylate**, Isodecyl **Salicylate**, Magnesium **Salicylate**, MEA-**Salicylate**, Ethylhexyl **Salicylate**, Potassium **Salicylate**, Methyl **Salicylate**, Myristyl **Salicylate**, Sodium **Salicylate**, TEA-**Salicylate**, and Tridecyl **Salicylate**.
AUTHOR: Anonymous
CORPORATE SOURCE: Cosmetic Ingredient Review Expert Panel.
SOURCE: International journal of toxicology, (2003) 22 Suppl 3 1-108. Ref: 320
Journal code: 9708436. ISSN: 1091-5818.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200404
ENTRY DATE: Entered STN: 20040116
Last Updated on STN: 20040420
Entered Medline: 20040419

AB Salicylic Acid is an aromatic acid used in cosmetic formulations as a denaturant, hair-conditioning agent, and skin-conditioning agent--miscellaneous in a wide range of cosmetic products at concentrations ranging from 0.0008% to 3%. The Calcium, Magnesium, and MEA salts are preservatives, and Potassium **Salicylate** is a cosmetic biocide and preservative, not currently in use. Sodium **Salicylate** is used as a denaturant and preservative (0.09% to 2%). The TEA salt of Salicylic Acid is used as an ultraviolet (UV) light absorber (0.0001% to 0.75%). Several Salicylic Acid esters are used as skin conditioning agents--miscellaneous (Capryloyl, 0.1% to 1%; C12-15 Alkyl, no current use; Isocetyl, 3% to 5%; Isodecyl, no current use; and Tridecyl, no current use). Butyloctyl **Salicylate** (0.5% to 5%) and Hexyldodecyl **Salicylate** (no current use) are hair-conditioning agents and skin-conditioning agents--miscellaneous. Ethylhexyl **Salicylate** (formerly known as Octyl **Salicylate**) is used as a fragrance ingredient, sunscreen agent, and UV light absorber (0.001% to 8%), and Methyl **Salicylate** is used as a denaturant and flavoring agent (0.0001% to 0.6%). Myristyl **Salicylate** has no reported function. Isodecyl **Salicylate** is used in three formulations, but no concentration of use information was reported. Salicylates are absorbed percutaneously. Around 10% of applied salicylates can remain in the skin. Salicylic Acid is reported to enhance percutaneous penetration of some agents (e.g., vitamin A), but not others (e.g., hydrocortisone). Little acute toxicity (LD(50) in rats; >2 g/kg) via a dermal exposure route is seen for Salicylic Acid, Methyl **Salicylate**, Tridecyl **Salicylate**, and Butyloctyl **Salicylate**. Short-term oral, inhalation, and parenteral exposures to salicylates sufficient to produce high blood concentrations are associated primarily with liver and kidney damage. Subchronic dermal exposures to undiluted Methyl **Salicylate** were associated with kidney damage. Chronic oral exposure to Methyl **Salicylate** produced bone lesions as a function of the level of exposure in 2-year rat studies; liver damage was seen in dogs exposed to 0.15 g/kg/day in one study; kidney and liver weight increases in another study at the same exposure; but no liver or kidney abnormalities in a study at 0.167

g/kg/day. Applications of Isodecyl, Tridecyl, and Butyloctyl **Salicylate** were not irritating to rabbit skin, whereas undiluted Ethylhexyl **Salicylate** produced minimal to mild irritation. Methyl **Salicylate** at a 1% concentration with a 70% ethanol vehicle were irritating, whereas a 6% concentration in polyethylene glycol produced little or no irritation. Isodecyl **Salicylate**, Methyl **Salicylate**, Ethylhexyl (Octyl) **Salicylate**, Tridecyl **Salicylate**, and Butyloctyl **Salicylate** were not ocular irritants. Although Salicylic Acid at a concentration of 20% in **acetone** was positive in the local lymph node assay, a concentration of 20% in **acetone**/olive oil was not. Methyl **Salicylate** was negative at concentrations up to 25% in this assay, independent of vehicle. Maximization tests of Methyl **Salicylate** , Ethylhexyl **Salicylate**, and Butyloctyl **Salicylate** produced no sensitization in guinea pigs. Neither Salicylic Acid nor Tridecyl **Salicylate** were photosensitizers. Salicylic Acid, produced when aspirin is rapidly hydrolyzed after absorption from the gut, was reported to be the causative agent in aspirin teratogenesis in animals. Dermal exposures to Methyl **Salicylate**, oral exposures to Salicylic Acid, Sodium **Salicylate**, and Methyl **Salicylate**, and parenteral exposures to Salicylic Acid, Sodium **Salicylate**, and Methyl **Salicylate** are all associated with reproductive and developmental toxicity as a function of blood levels reached as a result of exposure. An exposure assessment of a representative cosmetic product used on a daily basis estimated that the exposure from the cosmetic product would be only 20% of the level seen with ingestion of a "baby" aspirin (81 mg) on a daily basis. Studies of the genotoxic potential of Salicylic Acid, Sodium **Salicylate**, Isodecyl **Salicylate**, Methyl **Salicylate**, cosmetic product would be only 20% of the level seen with ingestion of a "baby" aspirin (81 mg) on a daily basis. Studies of the genotoxic potential of Salicylic Acid, Sodium **Salicylate**, Isodecyl **Salicylate** , Methyl **Salicylate**, Ethylhexyl (Octyl) **Salicylate**, Tridecyl **Salicylate**, and Butyloctyl **Salicylate** were generally negative. Methyl **Salicylate**, in a mouse skin-painting study, did not induce neoplasms. Likewise, Methyl **Salicylate** was negative in a mouse pulmonary tumor system. In clinical tests, Salicylic Acid (2%) produced minimal cumulative irritation and slight or no irritation(1.5%); TEA-**Salicylate** (8%) produced no irritation; Methyl **Salicylate** (>12%) produced pain and erythema, a 1% aerosol produced erythema, but an 8% solution was not irritating; Ethylhexyl **Salicylate** (4%) and undiluted Tridecyl **Salicylate** produced no irritation. In atopic patients, Methyl **Salicylate** caused irritation as a function of concentration (no irritation at concentrations of 15% or less). In normal skin, Salicylic Acid, Methyl **Salicylate**, and Ethylhexyl (Octyl) **Salicylate** are not sensitizers. Salicylic Acid is not a photosensitizer, nor is it phototoxic. Salicylic Acid and Ethylhexyl **Salicylate** are low-level photoprotective agents. Salicylic Acid is well-documented to have keratolytic action on normal human skin. Because of the possible use of these ingredients as exfoliating agents, a concern exists that repeated use may effectively increase exposure of the dermis and epidermis to UV radiation. It was concluded that the prudent course of action would be to advise the cosmetics industry that there is a risk of increased UV radiation damage with the use of any exfoliant, including Salicylic Acid and the listed salicylates, and that steps need to be taken to formulate cosmetic products with these ingredients as exfoliating agents so as not to increase sun sensitivity, or when increased sun sensitivity would be expected, to include directions for the daily use of sun protection. The available data were not sufficient to establish a limit on concentration of these ingredients, or to identify the minimum pH of formulations containing these ingredients, such that no skin irritation would occur, but it was recognized that it is possible to

formulate cosmetic products in a way such that significant irritation would not be likely, and it was concluded that the cosmetics industry should formulate products containing these ingredients so as to be nonirritating. Although simultaneous use of several products containing Salicylic Acid could produce exposures greater than would be seen with use of baby aspirin (an exposure generally considered to not present a reproductive or developmental toxicity risk), it was not considered likely that consumers would simultaneously use multiple cosmetic products containing Salicylic Acid. Based on the available information, the Cosmetic Ingredient Review Expert Panel reached the conclusion that these ingredients are safe as used when formulated to avoid skin irritation and when formulated to avoid increasing the skin's sun sensitivity, or, when increased sun sensitivity would be expected, directions for use include the daily use of sun protection.

L5 ANSWER 6 OF 13 MEDLINE on STN
ACCESSION NUMBER: 2003416885 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12956509
TITLE: Electroantennographic and behavioral responses of the sphinx moth Manduca sexta to host plant headspace volatiles.
AUTHOR: Fraser Ann M; Mechaber Wendy L; Hildebrand John G
CORPORATE SOURCE: ARL Division of Neurobiology, University of Arizona, P.O. Box 210077, Tucson, Arizona 85721-0077, USA.. afraser@post.harvard.edu
SOURCE: Journal of chemical ecology, (2003 Aug) 29 (8) 1813-33. Journal code: 7505563. ISSN: 0098-0331.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200402
ENTRY DATE: Entered STN: 20030906
Last Updated on STN: 20040206
Entered Medline: 20040205

AB Coupled gas chromatography with electroantennographic detection (GC-EAD) using antennae of adult female Manduca sexta was employed to screen for olfactory stimulants present in headspace collections from four species of larval host plants belonging to two families: Solanaceae--Lycopersicon esculentum (tomato), Capiscum annuum (bell pepper), and Datura wrightii; and Martyniaceae--Pronboscideaparviflora. Headspace volatiles were collected from undamaged foliage of potted, living plants. GC-EAD revealed 23 EAD-active compounds, of which 15 were identified by GC-mass spectrometry. Identified compounds included aliphatic, aromatic, and terpenoid compounds bearing a range of functional groups. Nine EAD-active compounds were common to all four host plant species: (Z)-3-hexenyl acetate, nonanal, decanal, phenylacetaldehyde, methyl **salicylate**, benzyl alcohol, geranyl **acetone**, (E)-nerolidol, and one unidentified compound. Behavioral responses of female moths to an eight-component synthetic blend of selected tomato headspace volatiles were tested in a laboratory wind tunnel. Females were attracted to the blend. A comparison of responses from antennae of males and females to bell pepper headspace volatiles revealed that males responded to the same suite of volatiles as females, except for (Z)-3-hexenyl benzoate. EAD responses of males also were lower for (Z)-and (E)-nerolidol and one unidentified compound. Electroantennogram EAG dose-response curves for the 15 identified EAD-active volatiles were recorded. At the higher test doses (10-100 microg), female antennae yielded larger EAG responses to terpenoids and to aliphatic and aromatic esters. Male antennae did respond to the higher doses of (Z)-3-hexenyl benzoate, indicating that they can detect this compound. On the basis of ubiquity of the EAD-active volatiles identified to date in host plant headspace collections, we suggest that M. sexta uses a suite of volatiles to locate and identify

appropriate host plants.

L5 ANSWER 7 OF 13 MEDLINE on STN
ACCESSION NUMBER: 2000263067 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10805317
TITLE: One step enzyme linked immunosorbent assay for direct estimation of serum cortisol.
AUTHOR: Basu A; Shrivastav T G
CORPORATE SOURCE: Department of Reproductive Biomedicine, National Institute of Health and Family Welfare, New Delhi, India.
SOURCE: Journal of immunoassay, (2000 Feb) 21 (1) 39-50.
Journal code: 8007167. ISSN: 0197-1522.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000720
Last Updated on STN: 20000720
Entered Medline: 20000707

AB One step competitive enzyme linked immunosorbent assay (ELISA) for direct estimation of cortisol in human serum is described. Cortisol-3-O-carboxymethyl-oxime-bovine serum albumin (cortisol-3-O-CMO-BSA) was used as an immunogen and cortisol-21-hemisuccinate-horse radish peroxidase (cortisol-21-HS-HRP) was used as a tracer. To the cortisol antibody coated microtiter wells, standards or serum samples (25 microl) along with cortisol-HRP conjugate (100 microl) were incubated for 2 hours at 37 degrees C. Bound enzyme activity was measured by, using TMB/H2O2 as a substrate. In this new strategy, chilled **acetone** stripped pooled human serum and sodium **salicylate** were used for preparing the standards and blocking the cortisol binding globulin (CBG), respectively. The sensitivity of the assay was .28 microg/100ml. The intraassay and interassay coefficient of variations (CVs) were ranged from 1.3% to 9.3% and 6.8% to 12.3 %, respectively. The analytical recoveries were 94% to 101.5%. The serum cortisol values, obtained by this method were correlated well with those, obtained by radioimmunoassay; r=0.95 (n=52).

L5 ANSWER 8 OF 13 MEDLINE on STN
ACCESSION NUMBER: 1998380705 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9714973
TITLE: Epidermal cytokine mRNA expression induced by hapten differs from that induced by primary irritant in human skin organ culture system.
AUTHOR: Matsunaga T; Katayama I; Yokozeki H; Nishioka K
CORPORATE SOURCE: Department of Dermatology, Tokyo Medical and Dental University, Japan.
SOURCE: Journal of dermatology, (1998 Jul) 25 (7) 421-8.
Journal code: 7600545. ISSN: 0385-2407.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199809
ENTRY DATE: Entered STN: 19980917
Last Updated on STN: 19980917
Entered Medline: 19980909

AB Epidermal cells produce various kinds of cytokines and express cell adhesion molecules. To analyze early events which induced in human epidermis by stimulation with various chemicals, we analyzed mRNA of cytokines expressed in epidermis in a human skin organ culture system. After painting haptens, primary irritants or vehicle control on human skin specimens sliced to 1 mm thickness and cut into approximately 5 x 5 mm

blocks, the pieces were cultured in serum-free medium. After separating epidermis from dermis, total RNA was extracted and mRNA of cytokines was assessed by the reverse transcriptase-poly-merase chain reaction. Only haptens induced IL-1 beta mRNA at 1-3 hours. TNF-alpha mRNA was induced 9 hours after application of haptens and 1 hour after application of primary irritants. IL-1 alpha mRNA was not induced by either haptens or primary irritants. Thus, cytokine mRNA expression induced by haptens in epidermis differs from that induced by primary irritants.

L5 ANSWER 9 OF 13 MEDLINE on STN
ACCESSION NUMBER: 1998220436 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9561969
TITLE: Assessment of the skin sensitization potential of topical medicaments using the local lymph node assay: an interlaboratory evaluation.
AUTHOR: Kimber I; Hilton J; Dearman R J; Gerberick G F; Ryan C A; Basketter D A; Lea L; House R V; Ladics G S; Loveless S E; Hastings K L
CORPORATE SOURCE: Zeneca Central Toxicology Laboratory, Macclesfield, Cheshire, UK.. IAN.KIMBER@APVXCI.ZENECA.COM
SOURCE: Journal of toxicology and environmental health. Part A, (1998 Apr 10) 53 (7) 563-79.
Journal code: 100960995. ISSN: 1528-7394.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199804
ENTRY DATE: Entered STN: 19980507
Last Updated on STN: 19980507
Entered Medline: 19980430

AB The murine local lymph node assay (LLNA) is a method for the predictive identification of chemicals that have a potential to cause skin sensitization. Activity is measured as a function of lymph node cell (LNC) proliferative responses stimulated by topical application of test chemicals. Those chemicals that induce a threefold or greater increase in LNC proliferation compared with concurrent vehicle controls are classified as skin sensitizers. In the present investigations we have evaluated further the reliability and accuracy of the LLNA. In the context of an international interlaboratory trial the sensitization potentials of six materials with a history of use in topical medicaments have been evaluated: benzoyl peroxide, hydroquinone, penicillin G, streptomycin sulfate, ethylenediamine dihydrochloride, and methyl **salicylate**. Each chemical was analyzed in the LLNA by all five laboratories. Either the standard LLNA protocol or minor modifications of it were used. Benzoyl peroxide and hydroquinone, both human contact allergens, elicited strong LLNA responses in each laboratory. Penicillin G, another material shown previously to cause allergic contact dermatitis in humans, was also positive in all laboratories. Streptomycin sulfate induced equivocal responses, in that this material provoked a positive LLNA response in only one of the five laboratories, and then only at the highest concentration tested. Ethylenediamine dihydrochloride dissolved in a 3:1 mixture of **acetone** with water, or in 4:1 **acetone**:olive oil (one laboratory), was uniformly negative. However, limited further testing with the free base of ethylene diamine yielded a positive LLNA response when applied in **acetone**:olive oil (AOO). Finally, methyl **salicylate**, a nonsensitizing skin irritant, was negative at all test concentrations in each laboratory. Collectively these data serve to confirm that the local lymph node assay is sufficiently robust to yield equivalent results when performed independently in separate laboratories and indicate also that the LLNA is of value in assessing the skin sensitization potential of topical medicaments.

L5 ANSWER 10 OF 13 MEDLINE on STN
ACCESSION NUMBER: 95061884 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7971717
TITLE: Characterization of esterase and alcohol dehydrogenase activity in skin. Metabolism of retinyl palmitate to retinol (vitamin A) during percutaneous absorption.
AUTHOR: Boehnlein J; Sakr A; Lichtin J L; Bronaugh R L
CORPORATE SOURCE: Cosmetic Toxicology Branch, Food and Drug Administration, Laurel, MD 20708.
SOURCE: Pharmaceutical research, (1994 Aug) 11 (8) 1155-9. Journal code: 8406521. ISSN: 0724-8741.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199412
ENTRY DATE: Entered STN: 19950110
Last Updated on STN: 19950110
Entered Medline: 19941223

AB Retinyl palmitate, a widely used ingredient in cosmetic products, is promoted for its beneficial effects on the appearance of skin. Previous studies suggest that enzymes are available in skin to metabolize this ingredient during skin absorption. Esterase activity hydrolyzes retinyl palmitate to retinol (vitamin A), which is oxidized in many tissues to retinoic acid primarily by alcohol dehydrogenase. The activities of esterase and alcohol dehydrogenase were characterized in hairless guinea pig skin by using flow-through diffusion cells and radiolabeled model compounds (methyl **salicylate** and benzyl alcohol) previously shown to be metabolized by these enzymes. Methyl **salicylate** was hydrolyzed by esterase to a greater extent in viable skin than in nonviable skin. Glycine conjugation of salicylic acid and benzoic acid occurred only in viable skin. The metabolism of methyl **salicylate** and benzyl alcohol occurred to a greater extent in male guinea pig skin than in female guinea pig skin. The percutaneous absorption of both radiolabeled compounds was similar in viable and nonviable skin. About 30 and 18% of topically applied retinyl palmitate were absorbed from an **acetone** vehicle by hairless guinea pig skin and human skin, respectively. Less than 1% of the applied dose of this lipophilic compound diffused from skin into the receptor fluid. Retinol was the only detectable metabolite of retinyl palmitate in both hairless guinea pig and human skin. In human skin, 44% of the absorbed retinyl palmitate was hydrolyzed to retinol. The use of retinyl palmitate in cosmetic formulations may result in significant delivery of retinol into the skin.

L5 ANSWER 11 OF 13 MEDLINE on STN
ACCESSION NUMBER: 90152718 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2620913
TITLE: Water-induced precipitation of cholesterol dissolved in organic solvents in the absence and presence of surfactants and salts.
AUTHOR: Mukhopadhyay L; Ray J; Das S; Bhattacharya P K; Moulik S P
SOURCE: Indian journal of biochemistry & biophysics, (1989 Jun) 26 (3) 178-85. Journal code: 0310774. ISSN: 0301-1208.
PUB. COUNTRY: India
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199003
ENTRY DATE: Entered STN: 19900601
Last Updated on STN: 19900601
Entered Medline: 19900322

AB The precipitation of cholesterol dissolved in organic solvents, viz.

methanol, ethanol, n-propanol, isopropanol, **acetone** and 1,4-dioxane, by the addition of water has been studied. The effects of the solvents towards the precipitation follow the order: methanol greater than ethanol greater than **acetone** greater than dioxane greater than n-propanol greater than iso-propanol, the solvent dioxane however exhibits a change in the order at higher concentration. Additives like Triton X-100, sodium cholate, sodium deoxycholate, sodium dehydro cholate, sodium **salicylate** and sodium chloride have some protective action against precipitation, the maximum protection being that of Triton X-100. The additives have shown better protective action in propanols and dioxane than in methanol, ethanol and **acetone**. Analysis of solvent composition and dielectric constant has revealed specific solvent effects on the water-induced precipitation of cholesterol. Thermodynamic analysis of the precipitation phenomenon and the unique role of solvent structure on cholesterol precipitation has been discussed.

L5 ANSWER 12 OF 13 MEDLINE on STN
ACCESSION NUMBER: 83025664 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6812993
TITLE: Analysis of serum by high-field proton nuclear magnetic resonance.
AUTHOR: Bock J L
SOURCE: Clinical chemistry, (1982 Sep) 28 (9) 1873-7.
Journal code: 9421549. ISSN: 0009-9147.
PUB. COUNTRY: United States
DOCUMENT TYPE: (CASE REPORTS)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198212
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19980206
Entered Medline: 19821221

AB Improvements in nuclear magnetic resonance (NMR) technology are generating an expanding variety of medical applications. In this investigation I have used high-field proton NMR to identify and quantity endogenous and ingested substances in human serum. After addition of a small amount of 2H2O and a reference compound to a 0.4-mL specimen, spectra were recorded for 3 min in Fourier-transform mode, with use of presaturation to suppress the extremely intense H2O peak. Compounds detected at clinically significant concentrations include glucose, alcohols, **acetone**, organic acids, and **salicylate**. Less than 1 mmol/L of some of these substances could be detected. For serum containing 20--500 mg of added methanol per liter, peak area was a linear function of concentration ($r = 0.998$). High-field proton NMR, despite the drawback of expensive, sophisticated instrumentation, offers some unique advantages for clinical chemistry: it permits rapid, specific, nondestructive measurement of several compounds simultaneously, including some that may be inconvenient to measure by conventional means.

L5 ANSWER 13 OF 13 MEDLINE on STN
ACCESSION NUMBER: 71293009 MEDLINE
DOCUMENT NUMBER: PubMed ID: 5572123
TITLE: Solubility of sodium **salicylate** in mixed solvent systems.
AUTHOR: Paruta A N; Mauger J W
SOURCE: Journal of pharmaceutical sciences, (1971 Mar) 60 (3) 432-7.
Journal code: 2985195R. ISSN: 0022-3549.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 197111
ENTRY DATE: Entered STN: 19900101
Last Updated on STN: 19980206
Entered Medline: 19711117

=> s methyl salicylate
L6 375 METHYL SALICYLATE

=> s l6 and L3
L7 6 L6 AND L3

=> d l7 1-6 ibib abs

L7 ANSWER 1 OF 6 KOSMET COPYRIGHT 2005 IFSCC on STN
ACCESSION NUMBER: 11508 KOSMET
FILE SEGMENT: scientific, technical
TITLE: INTERLEUKIN 6 PRODUCTION IN VITRO: AN ALTERNATIVE READ-OUT FOR THE LOCAL LYMPH NODE ASSAY
AUTHOR: HULTON J (ZENECA CENTRAL TOXICOLOGY LABORATORY, ALDERLEY PARK, MACCLESFIELD, CHESHIRE SK10 4TJ, UK); DEARMAN R J; DEBICKI R J; RAMDIN L S P; KIMBER I
SOURCE: TOXICOL IN VITRO, 1994, 8(4), 711-713, 6 REFS
Meeting Organizer: 3RD INTERNATIONAL CONFERENCE ON PRACTICAL IN VITRO TOXICOLOGY, JULY 1993, NOTTINGHAM, UK
DOCUMENT TYPE: Journal
LANGUAGE: English
AN 11508 KOSMET FS scientific, technical
AB The murine local lymph node assay has been developed as an alternative method for the identification of contact allergens. In contrast to guinea pig tests, which rely on visual assessment of challenge-induced dermal reactions, the local lymph node assay measures events occurring during the induction of skin sensitization. Contact allergic potential is measured as a function of hyperplastic responses in draining lymph nodes following systemic administration of (3H)-thymidine. We have now examined whether the production in vitro of interleukin 6 (IL-6_ by draining lymph node cells isolated from sensitized mice provides an alternative endpoint for the local lymph node assay. In comparative experiments, the production of IL-6 by lymph node cells in culture correlated closely with proliferative responses in vitro. Only chemicals known to cause contact sensitization elicited measurable (over 150 pg/ml) IL-6 production; nonsensitizing chemicals, including skin irritants, did not. Experience to date suggests that IL-6 production may provide a useful alternative read-out for the identification of chemicals which have a significant skin-sensitizing potential

L7 ANSWER 2 OF 6 MEDLINE on STN
ACCESSION NUMBER: 2004024023 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14617432
TITLE: Safety assessment of Salicylic Acid, Butyloctyl Salicylate, Calcium Salicylate, C12-15 Alkyl Salicylate, Capryloyl Salicylic Acid, Hexyldodecyl Salicylate, Isocetyl Salicylate, Isodecyl Salicylate, Magnesium Salicylate, MEA-Salicylate, Ethylhexyl Salicylate, Potassium Salicylate, **Methyl Salicylate**, Myristyl Salicylate, Sodium Salicylate, TEA-Salicylate, and Tridecyl Salicylate.
AUTHOR: Anonymous
CORPORATE SOURCE: Cosmetic Ingredient Review Expert Panel.
SOURCE: International journal of toxicology, (2003) 22 Suppl 3 1-108. Ref: 320
Journal code: 9708436. ISSN: 1091-5818.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200404
ENTRY DATE: Entered STN: 20040116
Last Updated on STN: 20040420
Entered Medline: 20040419

AB Salicylic Acid is an aromatic acid used in cosmetic formulations as a denaturant, hair-conditioning agent, and skin-conditioning agent--miscellaneous in a wide range of cosmetic products at concentrations ranging from 0.0008% to 3%. The Calcium, Magnesium, and MEA salts are preservatives, and Potassium Salicylate is a cosmetic biocide and preservative, not currently in use. Sodium Salicylate is used as a denaturant and preservative (0.09% to 2%). The TEA salt of Salicylic Acid is used as an ultraviolet (UV) light absorber (0.0001% to 0.75%). Several Salicylic Acid esters are used as skin conditioning agents--miscellaneous (Capryloyl, 0.1% to 1%; C12-15 Alkyl, no current use; Isocetyl, 3% to 5%; Isodecyl, no current use; and Tridecyl, no current use). Butyloctyl Salicylate (0.5% to 5%) and Hexyldodecyl Salicylate (no current use) are hair-conditioning agents and skin-conditioning agents--miscellaneous. Ethylhexyl Salicylate (formerly known as Octyl Salicylate) is used as a fragrance ingredient, sunscreen agent, and UV light absorber (0.001% to 8%), and **Methyl Salicylate** is used as a denaturant and flavoring agent (0.0001% to 0.6%). Myristyl Salicylate has no reported function. Isodecyl Salicylate is used in three formulations, but no concentration of use information was reported. Salicylates are absorbed percutaneously. Around 10% of applied salicylates can remain in the skin. Salicylic Acid is reported to enhance percutaneous penetration of some agents (e.g., vitamin A), but not others (e.g., hydrocortisone). Little acute toxicity (LD(50) in rats; >2 g/kg) via a dermal exposure route is seen for Salicylic Acid, **Methyl Salicylate**, Tridecyl Salicylate, and Butyloctyl Salicylate. Short-term oral, inhalation, and parenteral exposures to salicylates sufficient to produce high blood concentrations are associated primarily with liver and kidney damage. Subchronic dermal exposures to undiluted **Methyl Salicylate** were associated with kidney damage. Chronic oral exposure to **Methyl Salicylate** produced bone lesions as a function of the level of exposure in 2-year rat studies; liver damage was seen in dogs exposed to 0.15 g/kg/day in one study; kidney and liver weight increases in another study at the same exposure; but no liver or kidney abnormalities in a study at 0.167 g/kg/day. Applications of Isodecyl, Tridecyl, and Butyloctyl Salicylate were not irritating to rabbit skin, whereas undiluted Ethylhexyl Salicylate produced minimal to mild irritation. **Methyl Salicylate** at a 1% concentration with a 70% ethanol vehicle were irritating, whereas a 6% concentration in polyethylene glycol produced little or no irritation. Isodecyl Salicylate, **Methyl Salicylate**, Ethylhexyl (Octyl) Salicylate, Tridecyl Salicylate, and Butyloctyl Salicylate were not ocular irritants. Although Salicylic Acid at a concentration of 20% in **acetone** was positive in the local lymph node assay, a concentration of 20% in **acetone**/olive oil was not. **Methyl Salicylate** was negative at concentrations up to 25% in this assay, independent of vehicle. Maximization tests of **Methyl Salicylate**, Ethylhexyl Salicylate, and Butyloctyl Salicylate produced no sensitization in guinea pigs. Neither Salicylic Acid nor Tridecyl Salicylate were photosensitizers. Salicylic Acid, produced when aspirin is rapidly hydrolyzed after absorption from the gut, was reported to be the causative agent in aspirin teratogenesis in animals. Dermal exposures to **Methyl Salicylate**, oral exposures to Salicylic Acid, Sodium Salicylate, and **Methyl Salicylate**, and parenteral exposures to Salicylic Acid, Sodium

Salicylate, and **Methyl Salicylate** are all associated with reproductive and developmental toxicity as a function of blood levels reached as a result of exposure. An exposure assessment of a representative cosmetic product used on a daily basis estimated that the exposure from the cosmetic product would be only 20% of the level seen with ingestion of a "baby" aspirin (81 mg) on a daily basis. Studies of the genotoxic potential of Salicylic Acid, Sodium Salicylate, Isodecyl Salicylate, **Methyl Salicylate**, cosmetic product would be only 20% of the level seen with ingestion of a "baby" aspirin (81 mg) on a daily basis. Studies of the genotoxic potential of Salicylic Acid, Sodium Salicylate, Isodecyl Salicylate, **Methyl Salicylate**, Ethylhexyl (Octyl) Salicylate, Tridecyl Salicylate, and Butyloctyl Salicylate were generally negative. **Methyl Salicylate**, in a mouse skin-painting study, did not induce neoplasms. Likewise, **Methyl Salicylate** was negative in a mouse pulmonary tumor system. In clinical tests, Salicylic Acid (2%) produced minimal cumulative irritation and slight or no irritation(1.5%); TEA-Salicylate (8%) produced no irritation; **Methyl Salicylate** (>12%) produced pain and erythema, a 1% aerosol produced erythema, but an 8% solution was not irritating; Ethylhexyl Salicylate (4%) and undiluted Tridecyl Salicylate produced no irritation. In atopic patients, **Methyl Salicylate** caused irritation as a function of concentration (no irritation at concentrations of 15% or less). In normal skin, Salicylic Acid, **Methyl Salicylate**, and Ethylhexyl (Octyl) Salicylate are not sensitizers. Salicylic Acid is not a photosensitizer, nor is it phototoxic. Salicylic Acid and Ethylhexyl Salicylate are low-level photoprotective agents. Salicylic Acid is well-documented to have keratolytic action on normal human skin. Because of the possible use of these ingredients as exfoliating agents, a concern exists that repeated use may effectively increase exposure of the dermis and epidermis to UV radiation. It was concluded that the prudent course of action would be to advise the cosmetics industry that there is a risk of increased UV radiation damage with the use of any exfoliant, including Salicylic Acid and the listed salicylates, and that steps need to be taken to formulate cosmetic products with these ingredients as exfoliating agents so as not to increase sun sensitivity, or when increased sun sensitivity would be expected, to include directions for the daily use of sun protection. The available data were not sufficient to establish a limit on concentration of these ingredients, or to identify the minimum pH of formulations containing these ingredients, such that no skin irritation would occur, but it was recognized that it is possible to formulate cosmetic products in a way such that significant irritation would not be likely, and it was concluded that the cosmetics industry should formulate products containing these ingredients so as to be nonirritating. Although simultaneous use of several products containing Salicylic Acid could produce exposures greater than would be seen with use of baby aspirin (an exposure generally considered to not present a reproductive or developmental toxicity risk), it was not considered likely that consumers would simultaneously use multiple cosmetic products containing Salicylic Acid. Based on the available information, the Cosmetic Ingredient Review Expert Panel reached the conclusion that these ingredients are safe as used when formulated to avoid skin irritation and when formulated to avoid increasing the skin's sun sensitivity, or, when increased sun sensitivity would be expected, directions for use include the daily use of sun protection.

L7 ANSWER 3 OF 6 MEDLINE on STN
ACCESSION NUMBER: 2003416885 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12956509
TITLE: Electroantennographic and behavioral responses of the sphinx moth Manduca sexta to host plant headspace volatiles.
AUTHOR: Fraser Ann M; Mechaber Wendy L; Hildebrand John G

CORPORATE SOURCE: ARL Division of Neurobiology, University of Arizona, P.O. Box 210077, Tucson, Arizona 85721-0077, USA.. afraser@post.harvard.edu
SOURCE: Journal of chemical ecology, (2003 Aug) 29 (8) 1813-33. Journal code: 7505563. ISSN: 0098-0331.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200402
ENTRY DATE: Entered STN: 20030906
Last Updated on STN: 20040206
Entered Medline: 20040205

AB Coupled gas chromatography with electroantennographic detection (GC-EAD) using antennae of adult female Manduca sexta was employed to screen for olfactory stimulants present in headspace collections from four species of larval host plants belonging to two families: Solanaceae--Lycopersicon esculentum (tomato), Capiscum annuum (bell pepper), and Datura wrightii; and Martyniaceae--Pronboscideaparviflora. Headspace volatiles were collected from undamaged foliage of potted, living plants. GC-EAD revealed 23 EAD-active compounds, of which 15 were identified by GC-mass spectrometry. Identified compounds included aliphatic, aromatic, and terpenoid compounds bearing a range of functional groups. Nine EAD-active compounds were common to all four host plant species: (Z)-3-hexenyl acetate, nonanal, decanal, phenylacetaldehyde, **methyl salicylate**, benzyl alcohol, geranyl **acetone**, (E)-nerolidol, and one unidentified compound. Behavioral responses of female moths to an eight-component synthetic blend of selected tomato headspace volatiles were tested in a laboratory wind tunnel. Females were attracted to the blend. A comparison of responses from antennae of males and females to bell pepper headspace volatiles revealed that males responded to the same suite of volatiles as females, except for (Z)-3-hexenyl benzoate. EAD responses of males also were lower for (Z)-and (E)-nerolidol and one unidentified compound. Electroantennogram EAG dose-response curves for the 15 identified EAD-active volatiles were recorded. At the higher test doses (10-100 microg), female antennae yielded larger EAG responses to terpenoids and to aliphatic and aromatic esters. Male antennae did respond to the higher doses of (Z)-3-hexenyl benzoate, indicating that they can detect this compound. On the basis of ubiquity of the EAD-active volatiles identified to date in host plant headspace collections, we suggest that M. sexta uses a suite of volatiles to locate and identify appropriate host plants.

L7 ANSWER 4 OF 6 MEDLINE on STN
ACCESSION NUMBER: 1998380705 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9714973
TITLE: Epidermal cytokine mRNA expression induced by hapten differs from that induced by primary irritant in human skin organ culture system.
AUTHOR: Matsunaga T; Katayama I; Yokozeki H; Nishioka K
CORPORATE SOURCE: Department of Dermatology, Tokyo Medical and Dental University, Japan.
SOURCE: Journal of dermatology, (1998 Jul) 25 (7) 421-8. Journal code: 7600545. ISSN: 0385-2407.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199809
ENTRY DATE: Entered STN: 19980917
Last Updated on STN: 19980917
Entered Medline: 19980909

AB Epidermal cells produce various kinds of cytokines and express cell

adhesion molecules. To analyze early events which induced in human epidermis by stimulation with various chemicals, we analyzed mRNA of cytokines expressed in epidermis in a human skin organ culture system. After painting haptens, primary irritants or vehicle control on human skin specimens sliced to 1 mm thickness and cut into approximately 5 x 5 mm blocks, the pieces were cultured in serum-free medium. After separating epidermis from dermis, total RNA was extracted and mRNA of cytokines was assessed by the reverse transcriptase-poly-merase chain reaction. Only haptens induced IL-1 beta mRNA at 1-3 hours. TNF-alpha mRNA was induced 9 hours after application of haptens and 1 hour after application of primary irritants. IL-1 alpha mRNA was not induced by either haptens or primary irritants. Thus, cytokine mRNA expression induced by haptens in epidermis differs from that induced by primary irritants.

L7 ANSWER 5 OF 6 MEDLINE on STN
ACCESSION NUMBER: 1998220436 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9561969
TITLE: Assessment of the skin sensitization potential of topical medicaments using the local lymph node assay: an interlaboratory evaluation.
AUTHOR: Kimber I; Hilton J; Dearman R J; Gerberick G F; Ryan C A; Basketter D A; Lea L; House R V; Ladics G S; Loveless S E; Hastings K L
CORPORATE SOURCE: Zeneca Central Toxicology Laboratory, Macclesfield, Cheshire, UK.. IAN.KIMBER@APVXCI.ZENECA.COM
SOURCE: Journal of toxicology and environmental health. Part A, (1998 Apr 10) 53 (7) 563-79.
Journal code: 100960995. ISSN: 1528-7394.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199804
ENTRY DATE: Entered STN: 19980507
Last Updated on STN: 19980507
Entered Medline: 19980430

AB The murine local lymph node assay (LLNA) is a method for the predictive identification of chemicals that have a potential to cause skin sensitization. Activity is measured as a function of lymph node cell (LNC) proliferative responses stimulated by topical application of test chemicals. Those chemicals that induce a threefold or greater increase in LNC proliferation compared with concurrent vehicle controls are classified as skin sensitizers. In the present investigations we have evaluated further the reliability and accuracy of the LLNA. In the context of an international interlaboratory trial the sensitization potentials of six materials with a history of use in topical medicaments have been evaluated: benzoyl peroxide, hydroquinone, penicillin G, streptomycin sulfate, ethylenediamine dihydrochloride, and **methyl salicylate**. Each chemical was analyzed in the LLNA by all five laboratories. Either the standard LLNA protocol or minor modifications of it were used. Benzoyl peroxide and hydroquinone, both human contact allergens, elicited strong LLNA responses in each laboratory. Penicillin G, another material shown previously to cause allergic contact dermatitis in humans, was also positive in all laboratories. Streptomycin sulfate induced equivocal responses, in that this material provoked a positive LLNA response in only one of the five laboratories, and then only at the highest concentration tested. Ethylenediamine dihydrochloride dissolved in a 3:1 mixture of **acetone** with water, or in 4:1 **acetone**:olive oil (one laboratory), was uniformly negative. However, limited further testing with the free base of ethylene diamine yielded a positive LLNA response when applied in **acetone**:olive oil (AOO). Finally, **methyl salicylate**, a nonsensitizing skin irritant, was negative at all test concentrations in

each laboratory. Collectively these data serve to confirm that the local lymph node assay is sufficiently robust to yield equivalent results when performed independently in separate laboratories and indicate also that the LLNA is of value in assessing the skin sensitization potential of topical medicaments.

L7 ANSWER 6 OF 6 MEDLINE on STN
ACCESSION NUMBER: 95061884 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7971717
TITLE: Characterization of esterase and alcohol dehydrogenase activity in skin. Metabolism of retinyl palmitate to retinol (vitamin A) during percutaneous absorption.
AUTHOR: Boehnlein J; Sakr A; Lichtin J L; Bronaugh R L
CORPORATE SOURCE: Cosmetic Toxicology Branch, Food and Drug Administration, Laurel, MD 20708.
SOURCE: Pharmaceutical research, (1994 Aug) 11 (8) 1155-9. Journal code: 8406521. ISSN: 0724-8741.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199412
ENTRY DATE: Entered STN: 19950110
Last Updated on STN: 19950110
Entered Medline: 19941223

AB Retinyl palmitate, a widely used ingredient in cosmetic products, is promoted for its beneficial effects on the appearance of skin. Previous studies suggest that enzymes are available in skin to metabolize this ingredient during skin absorption. Esterase activity hydrolyzes retinyl palmitate to retinol (vitamin A), which is oxidized in many tissues to retinoic acid primarily by alcohol dehydrogenase. The activities of esterase and alcohol dehydrogenase were characterized in hairless guinea pig skin by using flow-through diffusion cells and radiolabeled model compounds (**methyl salicylate** and benzyl alcohol) previously shown to be metabolized by these enzymes. **Methyl salicylate** was hydrolyzed by esterase to a greater extent in viable skin than in nonviable skin. Glycine conjugation of salicylic acid and benzoic acid occurred only in viable skin. The metabolism of **methyl salicylate** and benzyl alcohol occurred to a greater extent in male guinea pig skin than in female guinea pig skin. The percutaneous absorption of both radiolabeled compounds was similar in viable and nonviable skin. About 30 and 18% of topically applied retinyl palmitate were absorbed from an **acetone** vehicle by hairless guinea pig skin and human skin, respectively. Less than 1% of the applied dose of this lipophilic compound diffused from skin into the receptor fluid. Retinol was the only detectable metabolite of retinyl palmitate in both hairless guinea pig and human skin. In human skin, 44% of the absorbed retinyl palmitate was hydrolyzed to retinol. The use of retinyl palmitate in cosmetic formulations may result in significant delivery of retinol into the skin.